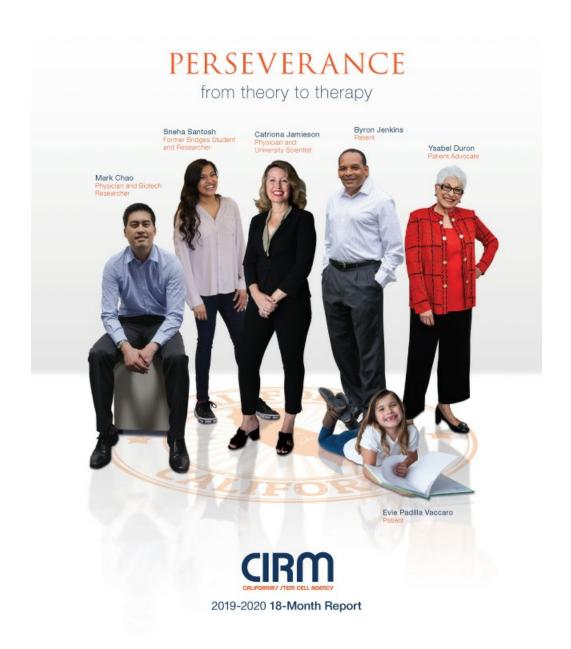


2019-2020 18 Month Report

The CIRM 2019-2020 18 Month Report details how California's Stem Cell Agency is transforming medicine, lives and futures by accelerating stem cell treatments to patients with unmet medical needs.

Download the CIRM 2019-2020 18 Month Report[pdf]

View previous annual reports



Living Our Mission

We work with focus and urgency, as though someone's life depends on it. Because it does.

At CIRM, we never forget that we were created by the people of California to accelerate stem cell that mission.

To meet this challenge, our team of highly trained and experienced professionals actively partners with both academia and industry in a hands-on, entrepreneurial environment to fast-track the development of today's most promising stem cell therapies — right here in California.

With \$3 billion in funding and more than 1,000 stem cell programs in our portfolio, CIRM is one of the world's largest institutions dedicated to helping people by bringing the future of cellular medicine

California Proposition 71

Paving the way for a new era of medicine, California Proposition 71 provides us with the opportunity to fund long-term projects, keep California-based scientific teams together, identify the most promising stem cell research, and support and accelerate that research into therapies to meet the health needs of Californians — and the world.

CIRM's work has proven to be an important lever for securing additional funding from investors for California-based research that may not have come to our state any other wa

Accelerate stem cell treatments

to patients with unmet medical needs

CIRM 2019-2020 18-Month Report

Dear Fellow Californians,



at the last 18 months at CIRM that provides an up-to-date view of our accomplishments and all that California has achieved in establishing a global hub of the emerging regenerative medicine industry right here in our state.

Our work in accelerating the discovery and development of a new field of medicine not only brings treatments and cures to patients with us and life-threatening conditions, it also benefits California as a who

An independent Economic Impact Report shows that the state - led by CIRM's efforts is generating billions of dollars in new sales and tax revenues and creating tens of thousands of new jobs. In addition, our education programs are developing a top-notch workforce to fill the pipeline of jobs in California's growing number of regenerative medicine companies.

CIRM accelerates the development of good science, including emergency-action projects to address COVID-19 in California, and makes breakthrough therapies available to its citizens through the statewide Alpha Stem Cell Clinics Network. We also take a lead role in raising awareness about predatory clinics that offer unproven "treatments" that put patients' health and lives at risk, while informing people about high quality, scientifically sound therapies.

Our commitment, as always, is to serve patients in need. We are confident that the world-class work we have enabled will do just that.

onathan Thomas, Ph.D., J.D.

mathan Thimas

Dear Friends,

In the past 18 months, CIRM has supported 14 more clinical trials (64 total at last count). When the coronavi rus pandemic hit, the CIRM funding model gave us the lexibility to respond by quickly supporting research into COVID-19, including three clinical trials. We are also testing therapies developed right here in California to treat cancer, diabetes, sickle cell disease, and other serious diseases and conditions.

Compiling scientific evidence takes time, but CIRM has accelerated the pace at which California's regenerative medicine research and discovery advances and is made available to patients throughout the state

The path to get a therapy approx by the Food and Drug Administration (FDA) can take 12 to 15 vears, require thousands of patients

years, require in outsines or parents for clinical trials and cost billions of dollars. CIRM is helping overcome those hurdles, working in partnership with the FDA to create a streamlined approval process that delivers much-needed treatments to patients who have few, if any, options to improve their debilitating or fatal conditions.

One thing that makes CIRM unique is our ability to identify, vet and support promising high risk but high reward science at the discovery stage supporting projects that may otherwise languish due to lack of funding-the phase of research that drives innovation but very rarely draws commercial investment. As featured in this report, CIRM has provided critical support for early-stage scientific discoveries at academic institutions that have gone on to secure commercial partnerships and investments that are helping move treatments closer to patients.

As you'll see in this Annual Report the pers of CIRM's leadership, the researchers we fund and the patient advocate community we serve is building



Maria T. Millan, M.D.

Focus. Guidance, Growth. Right Now.

Advancing Science

Accelerating Progress Aligning Opportunity

A wholly new ecosystem for advancing regenerative medicine

In the United States, it takes an average of 12 to 15 years for a typical new chemical drug to progress from the laboratory to a patient. Even then, out of 5,000 new drugs being developed, only five will advance to clinical trials, with just one gaining FDA approval. The cost of bringing a single drug to market is said to be more than \$1 billion.

In California, 64 CIRM-supported programs to find in celliorine, or cinvestipported programs or in new medical therapies (not chemical drugs, but therapies created from the body's own cells) have advanced to clinical trials. CIRIM also funded another 30 early-stage projects that later advanced to the clinical stage of development, including the content have been expressed but the IRIA. These two that have been approved by the FDA. These therapies emerged from the completely new field of medical science built on stem cell and gene-based therapies enabled by CIRM.

Of the CIRM-supported clinical trials, four are in the final stage before FDA approval (Phase III), as of June 2020.

Unlike traditional funders of medical research, CIRM has developed a systems approach to discovering and accelerating innovative medical treatments and has created a new, growing, multidisciplinary field of medical science - regenerative medicine-

CIRM is credited with creating California's robust arch, development, and clinical trial pipeline by doing things differently.

Accelerating Progress

De-risking innovation by funding early research (or "bench' science)—the stage of research that is the foundation of innovation, yet often overlooked by other funding sources

Vetting grant applications with rigor and incorporating input from patient communities, as well as insights from experts in their fields

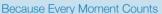
Structuring financial awards that are dependent on meeting certain scientific goals and milestones

Matching grantees with an advisory panel that helps accelerate researchers' progress and brings experience, knowledge, and resources to overcome obstacles and to help prepare for and navigate clinical trials

Supporting workforce development to prepare young people in California for careers in regenerative medicine

Making clinical trials at world-class medical centers available to the people of California through our funded institutions and CIRM's statewide network of Alpha Stem Cell Clinics

ADDRESSING COVID-19





The sooner we can get support to researchers, the sooner they can deliver the therapies that could save lives. CIRM's operating model has become the gold standard for fast funding and acceleration of medical research, but in the face of the COVID-19 crisis we knew we had to go a step further. We created a special \$5 million emergency fund for regid research to address the pandemic and significantly shortened the time that a grant request moved from application to funding to four weeks, rather than four months.

Within a few weeks of approving the funding, we were supporting a clinical trial to determine if blood plasma from patients who had recovered from the virus could help those newly infected. Another trial is designed to mitigate the damage the virus causes to lungs.

Extraordinary times require extraordinary action, and CIRM and the State of California are at the forefront of these efforts.

Our CIRM Alpha Stem Cell Clinics Network five clinics across the state-quickly expanded its efforts to respond to the coronavirus by Enrolling patients in clinical trials testing potential

therapies for COVID-19

Expanding telemedicine access to communicate with trial patients without them having to travel to the medical center

Developing stem cell models in the lab to test potential vaccines and medications before trying them on people



Michael Matthay, M.D.



CIRM funding is helping Dr. Michael Matthay at the University of California, San Francisco, expand a clinical trial to help underserved Centions, Self malicides, explain a climinal trial to help unberserved communities. People of color have been disproprionicately affected by the outbreak of COVID-19, yet they are typically not well represented in many clinical trials. Dr. Matthey and his follow researchers are changing that — making sure potential treatments benefit all Californians, without regard to income, insurance status or ethnicity.

One of the deadliest aspects of COVID-19 is the way it attacks the lungs. Even for patients who survive respiratory failure, the path back to normal daily living and work can take up to one year.

Dr. Matthay is running a clinical trial using stem cells to treat people with acute respiratory distress syndrome (ARDS), a serious form of respiratory failure found in many patients with severe cases of COVID-19. He explains, "This stem cell therapy is designed to help the lungs repair themselves, get patients off ventilators, and increase patients' odds

Focus, Guidance, Growth, Right Now,

Following the Science: from California to the world

Transforming knowledge,

discovery and science into innovation

Significant and sustained investment—led by CIRM, along with other funders—follows the science.

The science starts with basic research and discovery of how stem cells work. This early stage of research is where breakthrough therapies take shape, but because ideas are not yet proven, funders can be reluctant to invest. CIRM's approach is different. CIRM has systems in place that help identify and support the most promising science at the earliest stages of development, clearing the path, and inspiring other funders to get involved.

In the next phase, researchers take these new ideas and discoveries and translate them into potential therapies, designed to solve specific medical problems. Finally, only the most promising are tested in clinical trials.

At every step along the way, CIRM partners with the researchers—bringing in outside experts as necessary—to help them advance and succeed.

A new industry follows new science

Regenerative medicine is flourishing in California. Research continues to accelerate at a rapid pace, the number of biotechs in the state is continuing to grow, funding from a wide variety of sources is following CIRM's lead, and the number of clinical trials in the FDA-approval pipeline has exponentially increas

We're going to see more and more products reach market...we are on this essentially very steep portion of a growth curve."

Dr. Peter Marks of the FDA Center for Biologics Evaluation and Resea at a 2019 meeting of the Allianos for Regenerative Medicine





The scientist who wouldn't take no for an answer

Catriona Jamieson, M.D., Ph.D.



Being a great scientist is not just about having a brilliant mind, it's also about being persistent. Dr. Catriona Jamieson embod both these qualities. The University of California, San Diego, physician/researcher and current CIRM Alpha Clinics director championed early research, which was supported by CIRM and led to the development of a therapy called fedratinib to treat myelofibrosis, a type of blood cancer originating in the bone marrow.

PERSISTENT

Dr. Jamieson felt this therapy was too promising to be sidelined. She fought to continue the drug's advancement.

In August 2019, the FDA approved the drug, now marketed as INREBIC®, the first new treatment for myelofibrosis in a decade.

Advancing Science

2019-2020 Strategic Investments

CIRM supports education and research at various levels of development, from building infrastructure to clinical trials, that collectively form a unique regenerative medicine "e











\$5.7 million \$11.1 million \$49.4 million \$123.8 million

\$218.3 million \$478.9 million \$905.4 million \$357.9 million \$739.8 million

Education

CIRM is helping California prepare for the future by inspiring and guiding the next generation of scientists. We invest in students and young people, creating internships, educational programs, and training opportunities that give them the skills they need for a career in California's emerging regenerative medicine industry.

Infrastructure

CIRM helped create 12 state-of-the-art laboratories Crisin hepped create 1.2 state-of-the-art apportance that have attracted some of the best scientists in the world to California. We developed a network of top class medical centers to deliver treatments to patients and a stem cell research bank that is now the largest of its kind in the world.

Every great invention begins with a simple idea, someone daring to pose the question that starts with, "I wonder if." CIRM shares that sense of wonder and curiosity. Discovery—basic level research-is the key to innovation and at the heart of everything CIRM does. New ideas that push the boundaries of science and the scientists who dare to ask those "what if" questions is how

CIRM's goal is to take every idea that shows potential and help support and develop it, from an interesting theory to a promising therapy. Translational research does that, building on what's learned in Discovery then pushing it on to the next stage, clinical trials, where we see if it really works.

Everything CIRM does is focused on getting therapies to patients. Clinical trials—where new therapies are tested in people—are a vital final step in that process. It can take years of dedication, hard work and rigorous testing to see a project through from Discovery to a clinical trial. Only the very best projects get this far, and to date, CIPM has funded 64 clinical trials.

Another 30 projects in which CIPM provided early support have also gone to clinical trials—including two that have been approved by the FDA.



CIRM 2019-2020 18-Month Report

3

5-Year Goals The Big Six

Results as of June 30, 2020













In 2015, CIRM laid out a bold, strategic plan with ambitious goals, charting a course for the next five years. As we head into the final stretch of the plan, goals that once seemed audacious have already been met, and others are now within reach.

Over the past five years. CIRM has created a better faster, more efficient system for advancing promising stem cell and gene therapy science. By creating a model for accelerating regenerative medicine, CIRM is quickly reviewing and approving grant applications, speeding up funding for successful applicants, creating new pathways for CIRIM-funded researchers to have continued success with commercial partners, and helping prospective therapies vault regulatory hurdles expeditiously

For example, before 2015, the time it took to move a project from application to funding was more than a year. Today, it takes about four months. With the unprecedented rapid onset of the coronavirus pandemic and the need for even greater urgency in getting projects off the ground, CIRM expedited the grant approval process even further, to around four weeks.

We never stop looking for ways to improve, to be faster, smarter, and more responsive. Why? Because that's why we are here, to accelerate stem cell treatments to patients with unmet medical needs.



CIRM 2019-2020 18-Month Report

Science drives investment

An emerging industry creates an economic catalyst

With both the health and economic well-being of the state in mind, CIRM is supporting transformative treatments that can bring new therapies to patients as it also builds the world's leading innovation hub for stem cell research that is attracting financial investment, industry,

CIRM's efforts have stimulated growth of the regenerative medicine industry in California. The state's rapidly growing stem-cell and gene-therapy cluster is having a significant impact on California's economy.

A 2019 Economic Impact Report highlights the impact of CIRM's programs, including:

CIRM's Economic Impact

\$10.7 billion in additional sales revenue \$641 million more in state and

56,500+ new jobs created

The study, conducted by researchers at the USC Sol Price School of Public Policy, found about half of the new jobs were in medical and health-related of the new jobs were in medical and health-related research, menufacturing, and service sectors. New jobs were also created in sectors that indirectly support stem cell research, including construction and food services, for example. As the report's authors point out, "Because of the strong relationships of sectors in the California economy, all sectors in the state benefit from the existence of CIRM."

The regenerative medicine industry is poised for future growth, and as a leading global hub of stem cell and gene-based therapies, the state of California is expected to continue to be a global leader as the industry advances.

CIRM support leads to companies that attract private investment to

A wide range of programs supported by CIRM have resulted in rapidly growing biotech companies that enrich the California economy—advancing science, supporting job growth, and generating tax revenues for the state

CIRM Support Strategic Investments

Grantee	Focus area	CIRM support	Commercial milestone
Forty Seven Inc. (via Starford University)	A new immunotherapy approach to target cancer	Early-stage research, preclinical development and clinical trials	Acquired by California-based Glead Sciences, Inc. in April 2020 for nearly \$5 billion
jCyte	Adult stem cells to help battle a vision-destroying disease	Early-stage research, preclinical development and clinical trials	Raised \$252 million in licensing agreement
POSEIDA	Cell-based immuno- therapies for cancer	Preclinical development and clinical trials	\$283 million in venture capital financing, including \$75 million from Novartis
* VIACYTE	Cell replacement therapy for type 1 diabetes	Early-stage research and clinical trials	\$115 million in venture capital financing and industry partnerships
◆ TENAYA	Gene therapies for heart disease	Early-stage research	\$142 million in venture capital financing

jCyte Seeing it through



Co-Funding/Partnership Funding/Additional Funding

lot of help; no one person or company can do it all by themselves, not even CIRM. We can lay the foundations, but to get the most promising therapies to the levels that will help all the patients who would benefit from them, we need partners. Industry partners, in particular, help create access to additional capital and expertise.

When CIRM talks about industry funding, we mean investments into regenerative medicine projects that CIRM has previously or currently supports.

When investors see how the work we are supporting is not just showing promise, but also producing results, they are eager to be part of the program.

Since 2015, we have been able to attract \$8.9 billion in industry investment in researchers and companies we have supported. That money will help those promising therapies complete the clinical trials needed to show that they are both safe and effective, it will help them get approval from the Food and Drug Administration, so they are available to millions of people, not just the lucky few taking part in a clinical trial.

CIRM is a lender of first resort. We support projects long before most investors are ready to come on board. Our support, because we go to such great lengths to ensure that we only back the best science, helps take some of the risk out of a project, giving private funders more confidence that an early investment is a wise one.

New private funding has increased dramatically each year—from \$45.5 million in 2015 to more than \$5 billion in 2020.

New Industry Funding

2015 \$45.5 million

2016 \$153 million

2017 \$389 million

2018 \$1.3 billion

2019 \$1.5 billion

2020 \$5.5 billion

Total industry funding, 2015-2020: \$8.9 billion

CIRM and Private Industry Partnership Impact

By putting early support behind promising research programs, CIRIM has succeeded in bringing some of the best science to California, which has attracted significant additional scientific and commercial investments to the state and helped launch new cell-based therapy companies

>1,000 Projects Funded >\$8 billion Industry Investment Attracted

>40 Spin-Outs

CIRM 2019-2020 18-Month Report

Helping patients defeat cancer

by activating their own immune systems

White blood cells keep our immune systems strong. Some of them have the job of attacking threats by surrounding and digesting (often described as "eating") them and alerting other cells to come join the fight. But clever cancer cells can commandeer a "don't eat me" signal, called CD47, preventing the white cells from doing their job.

Creating an antibody that blocks the CD47 signals and simultaneously boost "eat me" signals is the core focus of Forty Seven Inc.'s research to enable the patient's own immune system to attack and destroy the cancer. This antibody is currently being evaluated in multiple clinical studies in patients with myelodysplastic syndrome, acute myeloid leukemia, non-Hodgkin lymphoma, ovarian cancer and colorectal carcinoma.

By investing in early innovative, and potentially transformative, re CIRM de-risks groundbreaking research. Armed with CIRM's seal of approval and access to CIRM's expert advisors and resources, research programs such as the anti-cancer project at Stanford Universtity are well positioned to achieve early results and attract investors and commercial partners.

This groundbreaking anti-cancer discovery was made by researchers including Mark Chao at Stanford University in 2010. Other possible funding sources overlooked this promising science, but CIRM believed this discovery had potential and would one day empower patients to fight cancer with their own immune cells. CIRM not only provided early funding, but also assembled a Clinical Advisory Panel of experts to help advance the program and overcome hurdles as the research progressed from diso and into clinical trials.

> "CIRM's support has been instrumental to our ability to rapidly progress Forty Seven's CD47 antibody targeting approach."

Mark Chao, M.D., Ph.D., co-founder

Fast-forward to April 2020:

the science discovered at Stanford (that later evolved into Forty Seven Inc.) was acquired by Gilead Sciences Inc. for nearly \$5 billion and combines Forty Seven's expertise with Gilead's strength in developing treatments that modify the immune system.

us, Guidance, Growth, Right Now. 13

Developing California's workforce

Ushering in a new era of medicine needs much more than simply funding good science, it requires a talent pool prepared to support the rapid growth in regenerative medicine. That's why CIRM is developing a diverse community of future scientists through programs designed to introduce young people (and even career-changers) to regenerative medicine and supporting their academic and career pursuits in the field.

Sparking Interest:

High School Programming

CIRM's education program begins with students in high school, where CIRM has made possible the curriculum for teaching regenerative medicine in California schools. In addition, the Summer Program to Accelerate Regenerative medicine Knowledge (SPARK) gives high school students a taste of what life in a stem cell research lab is like. SPARK summer internships expose students to world-class science and give them real-world context through community and patient outreach.

SPARK students reflect the diversity of California, including those who might otherwise not be able to afford a program like this. The majority of SPARK students are pursuing higher education in California as well.

Bridging from School to Career: Ongoing Education and Training

CIRM continues to nurture high-potential students through college, graduate school, and certificate programs, providing ongoing support to prepare candidates for jobs in California's university research centers and biotech companies.

Addressing unacceptable inequality in education and job skills is a top priority. By funding paid internships that provide critical experience, career connections, and a paycheck, CIBM's Bridges to Stem Cell Research Awards Program is leveling the playing field among all students and creating opportunities for students for whom a typical unpaid work experience might cause an economic hardship.

The Bridges program is integrated into the curriculum of 16 colleges and universities throughout California.

CIRM Bridges Program By the numbers

1,400 participants 48% first-generation college students

60% now employed in research and development positions

30% continue to further advance their postgraduate education





44 Bridges gave me the tools and networks to be successful in the biotech industry. Being exposed to the potential of stem cells made me want to help harness that

Sneha Santosh

Today, she is a cell culture associate with Novo Nordisk, a leading global healthcare company in Fremont, California.

A catalyst for scientific collaboration

Creating California Connections

Scientific collaboration between and among researchers, scientists, and private industry helps generate novel ideas and see them through.
With one of the most skilled and highly educated regenerative medicine workforces right here in California. CIRM serves as both a matchmaker for connecting ideas to human and financial resources and a knowledge hub of stem cell and gene therapy information and expertise to further advance the science.

CIRM's ongoing outreach and engagement with stem cell scientists throughout California creates connections that help the state's public and private organizations find and hire "best and brightest" talent that is already in the state. Also, to attract top stem-cell talent (as well as private industry collaborators) to the state, CIRIM maintains a presence in other markets where stem cell research is clustered and at world events that address and promote stem cell science.





CIRM 2019-2020 18-Month Report

Stem Cell Connection science and society

Symposia

Advancing California

CIRM hosts the Alpha Stem Cell Clinics Network Symposium, a public event held at a different location in California every year. Bringing together location in Calciform avery year. Enriging logerine ideas, insights and varying points of lew from experts, patients, and the public at large, these conferences provide a broad overview of current and future developments in the pursuit of FDA-approved stem cell-based therapeutics.

The 2019 symposium highlighted efforts of CIRM and others to develop a cure for sickle cell disease, a significant and costly health concern in Celifornia. (Learn more about the Cure Sickle Cell Initiative on page 22.)

Public Forums/Social Media

Public engagement and a better understanding of stem cell therapies is important for both science and society. CIRM engages the public in stem cell science through a wide range of public forums in communities throughout the state—ranging from high school presentations and TEDx talks, to live events hosted on social media, including "Ask the Stem Cell Team" on Facebook Live.



TEDx Gunn High School

Fighting unregulated clinics

As experts in the field of stem cell and gene therapy, it's also CIRM's duty to the people of California to effectively communicate the risks of untested, unregulated stem cell treatments that are not proven to be effective, are not approved by the FDA, and-in some cases-have even

41 am honored to be a voice to a community that longs to be heard. I am committed to represent all Californians, whose tax dollars make potentially life-saving research possible, so they-

Against discrimination. Against social injustice. Against inequality Against cancer.

For more than four decades, Ysabel Duron has been a pioneering (and award-winning) San Francisco Bay Area journalist—starting her career at a time when there were few Latinx individuals in TV news. Among the stories she covered was her own battle against Hodgkin's lymphoma, a blood cance. Her personal experience with cancer inspired the second act in her career: a health advocate for the Latinx community.

Ysabel Duron

too feel well served."

Stem cell therapies, like all new medicines, require diligent research, clinical trials, and regulatory approvals. CIRM is steadfast in its commitment to the advancement of legitimate stem cell research and fighting predatory purveyors of unproven and

Patient advocates

Patient advocates help bring perspective to CIRM's work so we can better serve Californian's unmet medical needs. These advocates led the charge that passed legislation that created CIRM in 2004 and have remained engaged with us every day since.

Ysabel founded Latinas Contra Cancer to provide education, screening access, and quality care to the most vulnerable in the Latinx community in California and the Latino Cancer Institute, a national network of cancer service providers that drives best practices, programs, and policies to eliminate the Latinx cancer burden. And now, she's bringing her activist spirit, passion, and commitment to health equality to the CIRM Board.

Unique to CIRM's approach, patient advocates are involved in all aspects of CIRM-supported research and development, including serving alongside scientists, researchers, and other experts on advisory penels that guide all recipients of CIRM funding as they progress through the translational and clinical stages of development.





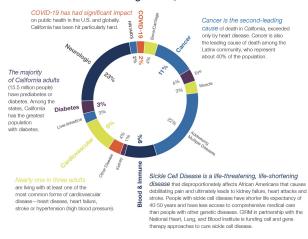
Responding to California's

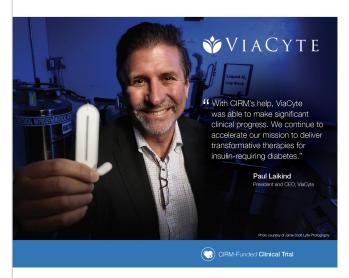
unmet medical needs

CIRM supports research that may one day provide new treatments for diabetes, cancer, and heart disease, as well as more than 70 other diseases, conditions, and injuries that affect millions of Californians, Research into rare and orphan diseases is also important in the advancement of medical science, since it can establish proof of concept, a starting point for therapies for other ases and conditions

In the U.S., health care costs for just six of the most chronic health conditions is about \$1 trillion annually; in California the cost is nearly \$100 billion each year. Therapies to reduce the severity of incidence of these chronic conditions have the potential to improve the health of millions of Californians and reduce health care costs for individuals, insurers, and the state

Percent of total grants by disease/condition





Imagine a pod

the length and thickness of a business card, but only half as wide. Inside this pod are beta cells (derived from stem cells) that, when implanted under the skin, will be able to sense the level of blood sugar. If it's too low, beta cells are designed to secrete insulin to restore blood sugar to a healthy level.

You don't have to imagine; it's real.

A San Diego company called ViaCyte developed it, with CIRM support, and is now testing it in people with type 1 diabetes.

Already, this cell-filled pod, called PEC-Direct, has proved it is durable and can survive in the has proved it is cultiable and call survive in the body. More important, preliminary clinical trial data have shown that a subset of type 1 diabetes patients who had PEC-Direct implanted as part of a clinical trial were able to produce human C-peptide (a biomarker for insulin production)something they hadn't been able to do be

ViaCyte's President and CEO, Dr. Paul Laikind, says he believes this is just the start.

Advancing California

Creating Acess: California-based clinical trials



CIRM 2019-2020 18-Month Report

130+ Clinical Trials

750+ Patients Treated

\$57M+ In Contracts with Commercial Sponsors

network of top California medical centers, given the name "Alpha" because they are the first of their kind, bringing the research, testing, and regulatory sides of clinical trials together under one roof to streamline and accelerate the process of getting stem cell therapies to patients

Currently, more than 70 trials are being conducted through CIRM's five Alpha clinics in 40 disease areas, including cancer, spinal cord injury, diabetes, heart disease, HIV, and diseases of blindness.

The Alpha Stem Cell Clinics Network provides statewide access to FDAsanctioned clinical trials of therapies funded by CIRM (and others) that are sponsored by both academia and industry.

Tackling Sickle Cell Disease: For California and the world

Around 100,000 Americans, most of them African Americans, suffer from sickle cell disease (SCD), It's a genetic condition that causes normally smooth blood cells to take on a rigid, sickle cell shape that blocks arteries, causes intense pain damages organs, and shortens life expectancy. Current treatments can relieve pain and help prevent complications associated with SCD, but there is no cure for most people.

CIRM has entered into a unique partnership with the National Heart, Lung, and Blood Institute to develop a cure for SCD within five to 10 years, setting aside tens of millions of dollars to support the program. CIRM is currently funding cutting-edge research, including three clinical trials, aimed at developing novel treatments.

In addition, CIRM's statewide Alpha Stem Cell Clinics Network has been named as a core program of the American Society of Hematology Sickle Cell Disease Collaborative Trials Network.

"We hear a lot about the moonshot for curing cancer, but a moonshot for curing sickle cell disease should also be possible. Sickle cell disease was the first genetic disease that was discovered, and wouldn't it be great if it is also one of the first ones we can cure in everyone?"

Dr. Mark Walters, Director, Blood and Marrow Transplant, UC San Francisco Benioff Children's Hospital Oakland



Financial Review: 2019-2020 18-Month Accounting

Financial Reconciliation, June 30, 2020

 January 1, 2019
 June 30, 2020

 Committed Balance
 \$2.6 billion
 \$2.7 billion

 Uncommitted Balance
 \$144 million
 \$45 million

 Balance Under Active Management
 \$351 million
 \$211 million

 Number of Programs Under Active Management
 214
 181

2020-2021 Approved I	Budget	As of June 30, 2020
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Total	\$54 million	
Grantee Meeting	\$250,000	
Discovery/Progression	\$2 million	
Discovery	\$2 million	
COVID-19	\$5 million	
Clinical	\$17 million	
Clinical - Sickle Cell Disease	\$28 million	
Program	Allocation	

All numbers rounded to the nearest million.

Came Ball Winners

People Behind the Performance

CIRM's greatest resource is its people. Every day, they show up, committed to bringing their expertise to bear to further our mission and speed up therapies to patients with unmet medical needs.

The team is relentless in its desire to help others, resourceful in finding ways to do more with less,

and works closely together to achieve the agency's goets. It is not unusual for members of OFIMs team to go above and beyond the call of duty to help others. To them, we award a Game Ball, to honor their role in making us all a better and more successful team.



Kent Fitzgerald Director of Discovery and



Maria Bonneville

Vice President of Admi
Istration, Executive Dire



Yimy Villa Marketing Communicati to Manager



Lauren Rath Grants Managemer Specialist (former)



Vice President, Portfolio Development and Revi



Gabe Thompson Director, Grants and



Koley Lambright Administrative Assistant, Therapeutics



Ben Huang Acting General Counsel



Bill Gimbel Director, information Technology



Denise D'Angel Associate Director, Human Resources

CIRM 2019-2020 18-Month Report

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